

44930 RELAY CONTROL MODULE

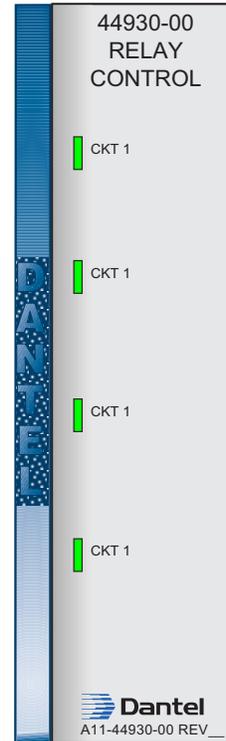


Table of Contents

| | |
|--------------------------------|---|
| Ordering Information | 2 |
| General Description | 2 |
| Circuit Description | 2 |
| Application Information | 4 |
| Installation | 4 |
| Technical Specifications | 6 |
| Warranty | 8 |

About this Practice:

This practice has been reissued to:

- Meet ISO 9001 requirements.

Reissued Practices: Updated and new content can be identified by a banner in the right margin.

Issue date: December 1997

UPDATED

CAUTION

- Install or remove modules from the shelf only when the power is off. If you install a module in the shelf with the power on, the internal circuitry may suffer damage and the product warranty will be void.
- Remove and install circuit boards only in a static-safe environment (use antistatic wrist straps, smocks, footwear, etc.).
- Keep circuit boards in their antistatic bags when they are not in use.
- Do not ship or store circuit boards near strong electrostatic, electromagnetic, magnetic, or radioactive fields.
- For more complete information on electrostatic discharge safety precautions, refer to Bellcore™ Technical Reference # TR-NWT-000870.

ORDERING INFORMATION

NOTE: This section lists the different options available for this product. To order any of the available options, contact Dantel Inside Sales through our toll-free number, 1-800-432-6835.

| OPTION NUMBER | FEATURES |
|---------------|----------------------|
| A11-44930-00 | Relay Control Module |

GENERAL DESCRIPTION

Dantel's 44930 Relay Control Module provides four (4) quadruple form-C type relays on a 400-type module. These can be used for general purpose contact switching in control applications.

This module is intended to be used with the Dantel 46028 Control Point Module whenever a requirement exists for up to four (4) contacts per alarm point. It is also useful in other general purpose applications because the relay coils are fully independent and strappable for either 24 or 48 VDC operation. Refer to *Circuit Description* section.

Each relay uses a front-panel mounted LED to indicate the status of that relay. The module operates on -21 to -56 VDC input power.

CIRCUIT DESCRIPTION

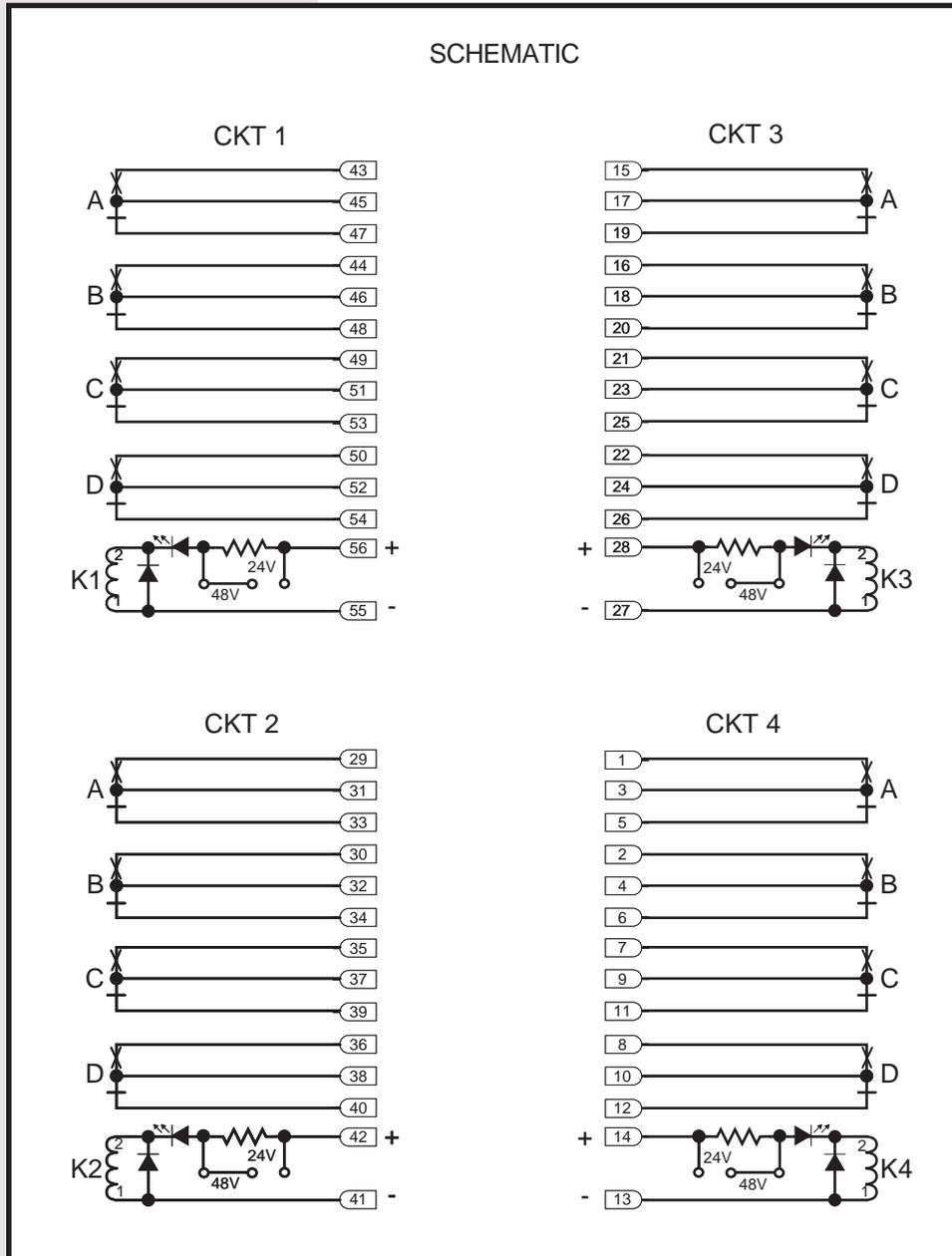
Fig. 1 depicts the functional schematic of the 44930 Relay Control Module.

Each of the four relays is activated by the application of positive and negative voltage across the relay's coil. This voltage can be either 24 or 48 volts, depending on how the K1, K2, K3, and K4 straps are set.

Each relay then has four form-C relays. A form C relay consists of a normally open (NO) set of contacts and a normally closed (NC) set of contacts. Again, refer to Fig. 1. As an example, when relay K1 is not energized, there is continuity between pins 45 & 47, 46 & 48, 51 & 53, and 52 & 54. Energizing K1 opens those contacts and connects 45 to 43, 46 to 44, 51 to 49, and 52 to 50.

CIRCUIT DESCRIPTION

FIG. 1 - FUNCTIONAL SCHEMATIC, 44930 RELAY CONTROL MODULE



APPLICATION INFORMATION

This module is intended to be used with the Dantel 46028 Control Point Module whenever a requirement exists for up to four (4) contacts per alarm point. It is also useful in other general purpose applications because the relay coils are fully independent and strappable for either 24 or 48 VDC operation. Refer to *Circuit Description* section.

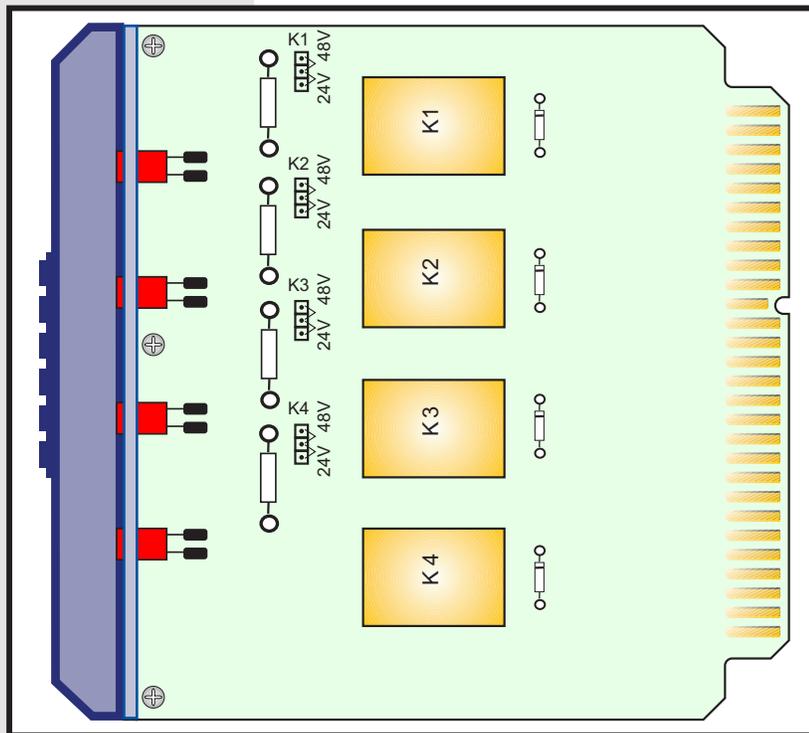
INSTALLATION

Installation consists of settings the straps, module installation and, wiring, and checkout.

Settings the straps

Fig. 2 shows the position of the straps. For each relay, K1 through K4, set the strap to 24 for 24 VDC operation or 48 for 48 VDC operation.

FIG. 2 - STRAP LOCATIONS, 44930 RELAY CONTROL MODULE

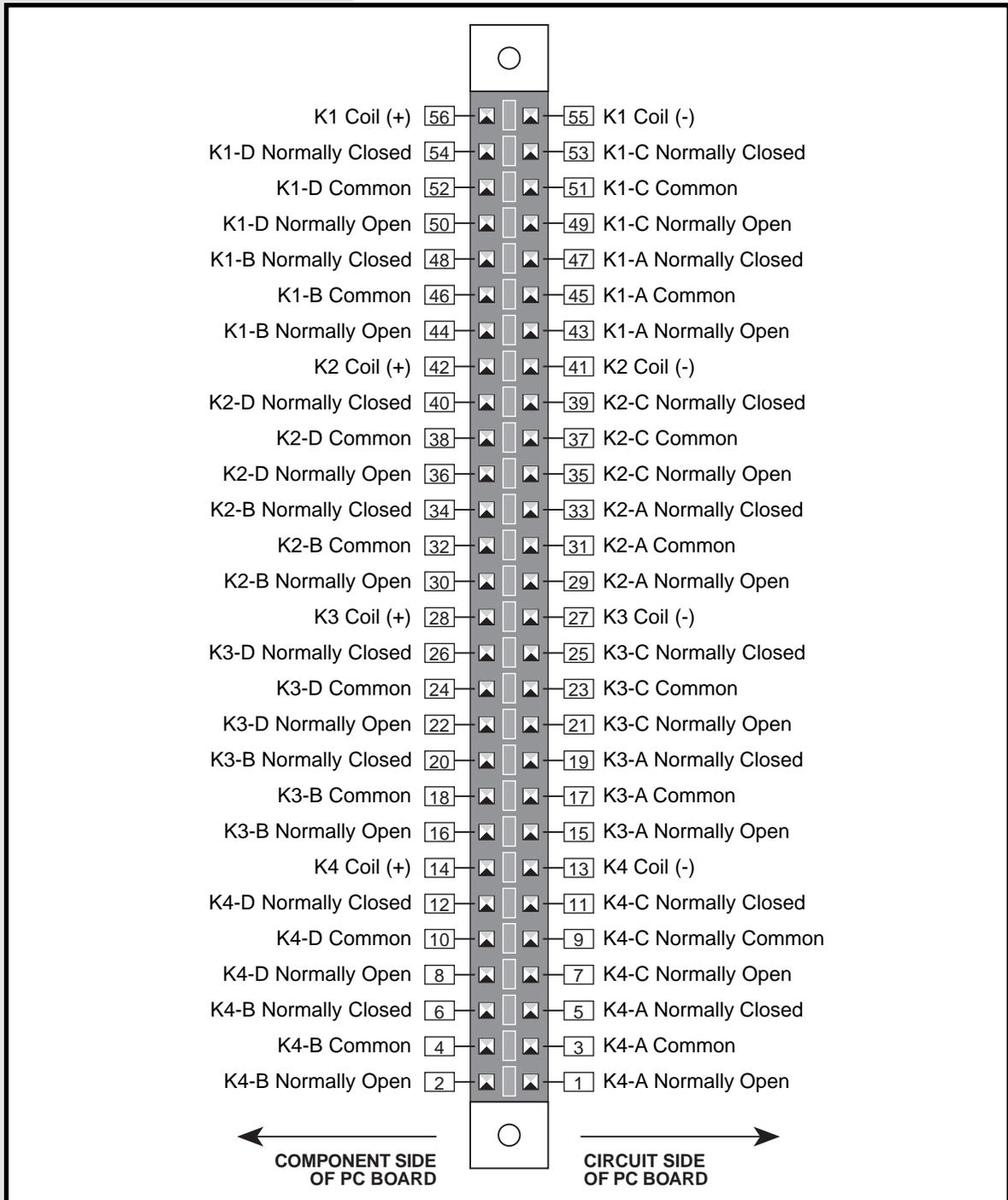


Module Installation and Wiring

Install the module in the proper slot in the shelf. Normally, the 56-pin edge connector for the slot is prewired at the factory. If you are going to wire the connector, refer to Fig. 3 for the edge connector pin designations and, if necessary, Fig. 1, in the *Circuit Description* section.

INSTALLATION

FIG. 3 - EDGE CONNECTOR PIN DESIGNATIONS, 44930 RELAY CONTROL MODULE



INSTALLATION

Checkout

Checkout of the 44930 Relay Control Module consists of operating each relay while the module is installed and checking that correct system functions occur. The individual LED should light on the front panel as power is applied to each relay. This, however, does not verify correct relay contact operation. Verify with a volt-ohm meter, or by observing the external equipment connected to the relay, the proper operation of the relay contacts.

TECHNICAL SPECIFICATIONS

| DESCRIPTION | DESCRIPTION |
|---|---|
| Input Power | 24 or 48 VDC |
| Input Current (± 3 mA) @ 24 VDC @ 48 VDC | 17 mA per circuit 13 mA per circuit |
| Heat Dissipation (max) @ 24 VDC @ 48 VDC | 1.40 Btu/Hr 2.13 Btu/Hr |
| Contact Rating | 2A max. @ 30 VDC 0.5A max. @ 125 VAC |
| Operating Temperature Range | -20° to 60° C. |
| Physical Dimensions | 1.4" x 6" x 5.6" |

NOTES

WARRANTY

LIMITED WARRANTY

The Seller warrants that the standard hardware products sold will be free from defects in material and workmanship and perform to the Seller's applicable published specifications for a period of 18 months for hardware, and 3 months for software, from the date of the original invoice. The liability of the Seller hereunder shall be limited to replacing or repairing, at its option, any defective products which are returned F.O.B. to the Seller's plant, (or, at the Seller's option, refunding the purchase price of such products). In no case are products to be returned without first obtaining permission and a customer return authorization number from the Seller. In no event shall the Seller be liable for any consequential or incidental damages.

Equipment or parts which have been subject to abuse, misuse, accident, alteration, neglect, unauthorized repair or installation are not covered by warranty. The Seller shall make the final determination as to the existence and cause of any alleged defect. No warranty is made with respect to custom equipment or products produced to the Buyer's specifications except as specifically stated in writing by the Seller in the contract for such custom equipment.

This warranty is the only warranty made by the Seller with respect to the goods delivered hereunder, and may be modified or amended only by a written instrument signed by a duly authorized officer of the Seller and accepted by the Buyer.

Warranty and remedies on products not manufactured by the Seller are in accordance with warranty of the respective manufacturer. **THE SELLER MAKES NO OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED; AND ALL IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEEDS THE AFORESAID OBLIGATIONS IS HEREBY DISCLAIMED BY THE SELLER.**

IN CASE OF DIFFICULTY

If you experience difficulty with this equipment, check the following, as appropriate:

- 1. Switch settings**
- 2. Signal levels**
- 3. Software configuration**
- 4. Connections between Dantel's equipment and your equipment.**

If there is still a problem, substitute equipment that is known to be good. For additional assistance, call Dantel's Technical Field Service Department weekdays, 6 A.M. to 5 P.M. pacific time:

1-800-4DANTEL (1-800-432-6835).

If a thorough checkout shows a piece of equipment has malfunctioned, you may return it to the factory. For repairs and emergency replacements, obtain a Return Material Authorization (RMA) number from the Customer Service Representative at **1-800-4DANTEL (1-800-432-6835)**.

To ensure expedient processing of your order, provide a purchase order number and shipping and billing information when requesting an RMA number. Also, when the units are returned to Dantel, include a description of the failure symptoms for each unit returned. Send defective equipment to:

Dantel, Inc. • 2991 North Argyle Avenue • Fresno, California 93727-1388

